77 Rec'd PCT/PTO 11 0CT 2001

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED / ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

TTORNEY'S DOCKET NUMBER
P67183US0

US APPLICATION NO. (IF 19 972°6 CP315) 9

INTERNATIONAL APPLICATION NO

PCT/JP00/2420

neget e

INTERNATIONAL FILING DATE

13 April 2000

PRIORITY DATE CLAIMED

14 April 1999

TITLE OF INVENTION

METHOD FOR RENEWING LIVING BEING PERMANENTLY

APPLICANT(S) FOR DO/EO/US

Izumi ARAI

Γ	Applicant herein submits to the United States Designated/Elected Office (DO/EO/US) the following							
	items	s and other information.						
	1.	This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.						
	ž. 🗖	This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.						
	3. 🔲	This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay						
		examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).						
		A proper Demand for Internatl. Preliminary Examination was made by the 19th month from earliest claimed priority date.						
	5.	A copy of the International Application as filed (35 U.S.C. 371(c)(2))						
		a is transmitted herewith (required only if not transmitted by the International Bureau).						
		b. has been transmitted by the International Bureau.						
1		c. I is not required, as the application was filed in the United States Receiving Office (RO/US)						
	6.	A translation of the International Application into English (35 U.S.C. 371(c)(2)).						
1	7	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))						
		a. are transmitted herewith (required only if not transmitted by the International Bureau).						
:		b. A have been transmitted by the International Bureau.						
1	. **	c. have not been made; however, the time limit for making such amendments has NOT expired.						
		d. have not been made and will not be made.						
	8.	A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).						
		An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).						
:	10.	A translation of the annexes to the Internatl. Preliminary Examination report under PCT Article 36 (35 U.S.C. 371(c)(5)).						
	ltome	s 11. to 16. below concern other document(s) or information included:						
ii daya	_	An Information Disclosure Statement under 37 CFR 1.97 and 1.98.						
		An assignment document for recording. A separate cover sheet compliance with 37 CFR 3.28 and 3.31 is included.						
	-	A FIRST preliminary amendment.						
	10.	A SECOND or SUBSEQUENT preliminary amendment.						
	14.	A substitute specification.						
	15.	A change of power of attorney and/or address letter.						
		Other items or information:						
į	10.	PCT Request Form						
		First Page of Publication						
		Small Entity Declaration						
	ì							

ng/92	26309	PCT/JP00	i02420	P6718	3US0			
		<u> </u>		CALCULATIONS	PTO USE ONLY			
17. The following fees								
Basic National Fee (37 (
Internatl. prelim. examina	1)) \$710.00							
No international prelimina (a) (2)) but international s								
Neither international preli nor international search f								
International preliminary (a) (4)) and all claims sat								
Search Report prepared	by the EPO or JPO (37	7 CFR 1.492 (a) (5)) .	\$890.00					
	ENTER APPRO	OPRIATE BASIC FI	EE AMOUNT =	\$ 890.00				
Surcharge of \$130.00 for	furnishing the oath or om the earliest claimed			\$ 130.00				
Claims	Number Filed	Number Extra	Rate					
Total Claims	13 - 20 =	-0-	x \$18.00	\$				
Independent Claims	3 - 3 =	-0-	x \$84.00	\$				
Multiple Dependent Clain	n(s) (if applicable)	I	+ \$280.00	\$				
· · · · · · · · · · · · · · · · · · ·		L OF ABOVE CALO	CULATIONS =	\$ 1020.00				
Reduction by 1/2 for filing Entity statement must als			all	\$ 510.00				
			SUBTOTAL =	\$ 510.00				
Processing fee of \$130 fo	or furnishing the Engli on the earliest claimed			\$				
			IONAL FEE =	\$ 510.00				
Fee of \$40.00 for recordi	ng the enclosed assig			,				
Assignment must be acc	ompanied by appropria	ate cover sheet (37 Cl	R 3.28, 3.31).	\$				
		TOTAL FEES	ENCLOSED =	\$ 510.00				
				Amt. to be refunded:	\$			
				Amt. charged:	\$			
a. A check in the amount of \$ 510.00 to cover the above fees is enclosed. b. Please charge my Deposit Account No. 06-1358 in the amount of \$ to cover the above fees.								
1 '	A duplicate copy of this sheet is enclosed.							
pendency of this ar	c. The Commissioner is hereby authorized to charge my account any additional fees set forth in §1.492 during the pendency of this application, or credit any overpayment to Deposit Account No. 06-1358. A duplicate copy of this sheet is enclosed.							
SEND ALL (SEND ALL CORRESPONDENCE TO:							
	JACOBSON HOLMAN PLLC							
1	Street, N.W., Suite		*	/ey/B(Jacobso)	71, Jr.			
	nington, DC 2000 2-638-6666	4	Keg.	. No. 20,851				
	ER NUMBER: 00	136			JPH&S 3/95			

METHOD FOR RENEWING LIVING BEING PERMANENTLY (PCT/JP00/02420)

Izumi Arai 19–16, Senjumidoricho 2-chome, Adachi-ku, Tokyo 120-0044 Japan

The field of my invention

This invention belongs to the field of biology and life science.

Past ways of thinking

So far, all creatures were thought to die.

The point of my invention

This invention liberates creatures from death. In order to attain the purpose, this invention is repetition of the exchange process of organs produced by regenerating cells, tissues, and organs of living things.

Concise explanations of my inventive figures

The first figure shows that an egg produced by nuclear transplantation from cells of individuals and clones is cultivated.

The second figure shows that an individual regains one's health by exchanging old hurt organs such as cells, tissues, and organs of the individual injured in diseases and accidents for new regenerated ones such as cells, tissues, and organs prepared in clone bodies.

The effective method of my invention

I will explain this invention in detail, according to attached figures.

To begin with, as Fig.1 shows, the nucleus of the cell in individuals or clone bodies is transplanted into an egg. Namely, the cell in individuals containing the same types of genes is united with the non-fertilized egg in which polar bodies and chromosomes were removed. And by cell fusion the nucleus is transferred from the cell to the egg. The egg after nuclear transplantation is nurtured in the incubator such as artificial organs or is developed in living bodies such as greater omentum, uterus, etc. And regenerated organs of clone bodies are created like cells, tissues, and organs, as Fig.2 shows. It is possible to take in different kinds of cells, tissues, and organs such as chloroplasts, mitochondria, gills, wings, etc.

Old hurt organs such as cells, tissues, and organs of the individual injured in diseases and accidents are exchanged for new regenerated organs such as healthy cells, tissues, and organs. And an individual is restored to health. Old hurt organs such as cells, tissues, and organs of the injured individual are absorbed or removed, but a part of old ones can be utilized over again. Also, clone bodies can be reconstructed. The individual develops from not only the fertilized oocyte but also the differentiated cell. Therefore, by return from the individual, to the organ, to the tissue, and to the cell, that is, the basic level, I can recover healthy individuals, organs, tissues, and cells even from injured individuals, organs, tissues, and cells. Also, it is possible to unite them across the border of each level.

On respective cells, tissues, and organs, by repetition of the above process, I can maintain healthy individuals. Hurt organs injured in diseases and accidents are various on each occation. As the need arises, I repeat this inventive course. And I can renovate life infinitely toward the eternal future. I can use together artificial materials and spontaneous recovery from internal troubles by external stimuli.

The significance in my invention

In this way, my invention permanently keeps individuals healthy by newly changing each hurt organs such as cells, tissues, and organs of individuals injured in a great variety of diseases and accidents for healthy regenerated organs such as cells, tissues, and organs containing the same types of genes. With repeating this process succeedingly to the future, I can incorporate the improvement by higher quality genes suitable for survival, artificial materials, new energy utility systems, etc., into these repetitive processes. And then I can raise the capacity of interchangeable cells, tissues, and organs, create more versatile progress of individuals, and eternally renovate life.

The scope of my invention

I repeat the process of exchanging hurt organs such as cells, tissues, and organs of individuals injured in diseases and accidents for newly—made healthy ones by regenerating cells, tissues, and organs of life, etc. And I preserve everlasting healthy individuals and rescue creatures from death. By these succeedingly repeated processes toward the future, replacement for better quality genes and utilization of artificial materials and new energy systems are integrated into these processes. In this way, I can improve the performance of cells, tissues, and organs, and create the individual evolving diversely, and renovate life perpetually.

The summary

In the past, living things were thought to die. I liberate creatures from death, and renovate life forever. I regenerate organs(6) such as cells, tissues, and organs of clone bodies(5) produced by the cultivation(4) of the egg(3) whose nucleus(2) is transplanted from the

cell(1) of individuals or clone bodies. And I replace hurt organs(7) such as cells, tissues, and organs of individuals injured in diseases and accidents(8) for newly regenerated ones(6). Therefore I can regain healthy individuals(9). I repeat these processes shown in Fig.2. Whenever injuries occur in various diseases and accidents, etc., I repeat these above processes, with using together high quality genes, artificial materials, the construction of new organ systems, spontaneous recovery by external stimuli, etc. And then I can improve the performance of cells, tissues, and organs, and promote the diverse evolution of individuals.

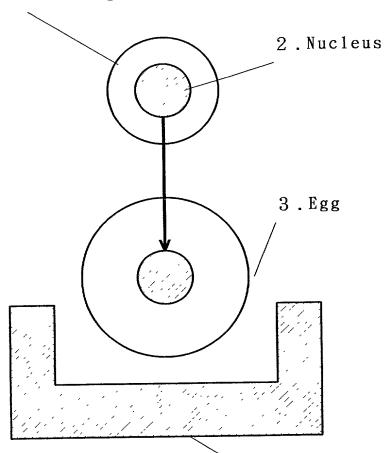
What is claimed is:

- 1. A method of maintaining the health of a subject which comprises replacing at least one organ present in the subject with at least one cloned organ.
- 2. The method of claim 1, wherein the organ that is replaced is diseased, injured, or both.
- 3. The method of claim 1, wherein the cloned organ is cloned from the subject's genetic material.
- 4. The method of claim 1, wherein the step is repeated when the cloned organ becomes diseased, injured, or both.
- 5. The method of claim 1, which further comprises utilizing a part of the organ that is replaced.
- 6. The method of claim 5, wherein the part of the organ that is replaced is used to clone the cloned organ.
- 7. A method of reconstructing a body of a subject which comprises cloning the body from a cell of the subject, a tissue of the subject, an organ of the subject, or a combination thereof
- 8. A method of treating a subject which comprises replacing at least one organ present in the subject with at least one cloned organ and repeating when the cloned organ becomes diseased, injured, or both or replacing at least one gene of the subject with a better quality gene.

- 9. The method of claim 8, wherein the method diversely evolves the subject.
- 10. The method of claim 8, wherein the method improves the performance of a cell, a tissue, or an organ in the subject.
- 11. The method of claim 8, wherein the method permanently renovates the life of the subject.
- 12. The method of claim 8, which further comprises utilizing artificial materials.
- 13. The method of claim 8, which further comprises using new energy systems.

Figure No. 1

1. The cell in individuals or clone bodies containing the same types of genes

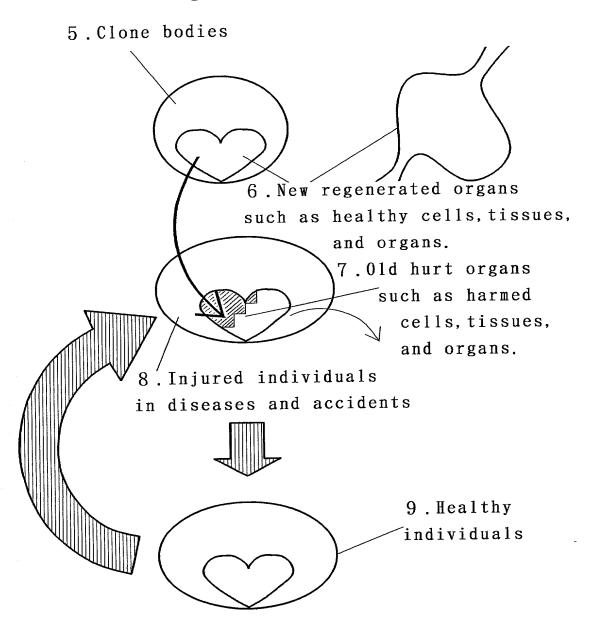


4. The cultivation in the incubator such as artificial organs, or in living bodies such as greater omentum, uterus, etc.

arrens qu

The way to the contract of the

Figure No. 2



AND POWER OF ATTORNEY

DECLARATION U.S.A.

	P67183US0	,	`		يتوسك ع.
	ATTORNEYS' DOCKET NO.			`	4 36
1	FOR ATTORNEYS' USE ONLY	,			

ALL PATENTS, INCLUDING DESIGN FOR APPLICATION BASED ON PCT; PARIS CONVENTION; NON PRIORITY; OR PROVISIONAL APPLICATIONS

	matter which is claimed and for which patent is s METHOD FOR RENEWING LIVING which is described and claimed in:		N BOT International Appl	destan No	PCT/JP00/01	2420			filed	April '	13. 200	10
L			=	X PCT International Application No PCT/JP00/02420 the specification in application Serial No.			-	Octobe				
	the attached s	pecification	(if applicable) and a		ai Nu.			***	-			
	I acknowledge the	e duty to disclose informati eign priority benefits under n for patent or inventor's o	erstand the contents of the abo on which is material to patenta r Title 35, United States Code, ertificate having a filing date be	ability as defin . §119 (a)-(d) (ied in Title 37, Coo of any foreign appl	ie of Feder lication(s) f	al Regulations, §1 or patent or invent	.ac.			nave also	identified be
	•	iication(s)	IADAN			1.1 A	pril 1999			X	П	
	154200 (Number)		(Country)				Month/Year Filed)		-	Yes	No	
7	(Number)	·····	(Country)		···········	(Day/N	Ionth/Year Filed)			Yes	No	
3					,							
╛	(Number)		(Country)			(Day/M	Ionth/Year Filed)			Yes	No	
1	I hereby claim the	benefit under Title 35, Ur	nited States Code,§119(e) of a	any United Sta	ites provisional app	plication(s)	listed below:					
1	Application No.		Filing Date							Filing Da	te	
3			nited States Code, §120 of any ion in the manner provided by Federal Regulations, §1.56 wh					olication and	the nation	al or PCT	internatio	onal filing da
nd 20.	WER OF ATTORN transact all busine 640): ALLEN S. N	ess in the Patent and Tr MELSER (27,215); MIC	ntor, I hereby appoint the for ademark Office connected CHAEL R. SLOBASKY (26.	ollowing attor	HARVEV R IA	CORSON	J.IR (20.851)*.	IOHN CLA	receive a	nd act or LMAN (2	n instruct 22,769); l	ions from i
nd 20.	WER OF ATTORN transact all busine 640): ALLEN S. N ON S. HAM (45,3	NEY: As a named inverses in the Patent and Tr MELSER-(27,215); MIC 07) and NATHANIEL A RRESPONDENCE TO	ademark Office connected CHAEL R. SLOBASKY (26 A. HUMPHRIES (22,772) CUSTOMER NO. 0013 Or ACOBSON HOLM CONAL LIMITED LIABILITY	ollowing attor d therewith. 3,421); JON/ 36	neys (Registratic HARVEY B JA ATHAN L SCHE	CORSON	J. JR. (20,851); 9,851); IRWIN M DIRECT TELE (please	pplication, JOHN CLA AISENB PHONE Cuse Attor	receive a ARKE HC ERG (19. CALLS TO ney's Doo	nd act or PLMAN (2 007); WII D. Sket No.)	instruct 22,769); LLIAM E (202) 63	ions from a MARVIN F PLAYER 38-6666
nd 20,	WER OF ATTORN transact all busine 640): ALLEN S. N ON S. HAM (45.3 SEND COR	NEY: As a named inverses in the Patent and Tr MELSER (27,215); MIC 07) and NATHANIEL A RRESPONDENCE TO PROFESS	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILIT 100 SEVENTH STREET, N. WASHINGTON, D.C., 201	ollowing attor of therewith. 5,421); JONA 36. IAN TY COMPAI N.W.	neys (Registratic HARVEY B JA ATHAN L SCHE	CORSON	J. JR. (20,851); 9,851); IRWIN M DIRECT TELE (please	pplication, JOHN CLA AISENB PHONE Cuse Attor	receive a ARKE HC ERG (19. CALLS TO ney's Doo	nd act or PLMAN (2 007); WII D. Sket No.)	instruct 22,769); LLIAM E (202) 63	ions from a MARVIN F PLAYER 38-6666
nd 20, 'O'	NER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3 SEND COF	NEY: As a named inverses in the Patent and Tr MELSER (27,215); MIG 07) and NATHANIEL A RRESPONDENCE TO PROFESS	ademark Office connected CHAEL R. SLOBASKY (26 A. HUMPHRIES (22,772) CUSTOMER NO. 0013 Or ACOBSON HOLM CONAL LIMITED LIABILITY OS SEVENTH STREET, N	MAN TY COMPAI N.W. 004	neys (Registratic HARVEY B JA ATHAN L SCHE	CORSON	J. JR. (20,851); 9,851); IRWIN M DIRECT TELE (please	pplication, JOHN CLA AISENBI PHONE C use Attor JAC FESSION	receive a ARKE HC ERG (19. CALLS TO ney's Doo	nd act or pLMAN (2 007); WII D. kket No.) N HO ED LIAB	instruct 22,769); LLIAM E (202) 63	ions from a MARVIN F PLAYER 38-6666
nd 20, 'O'	WER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF	NEY: As a named inverses in the Patent and Tri MELSER.(27,215); MIC 07) and NATHANIEL A RRESPONDENCE TO PROFESS ust include at least one FAMILY NAME ARAL	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILIT 100 SEVENTH STREET, N. WASHINGTON, D.C., 201	ollowing attor of therewith. 6,421); JONA 36 IAN TY COMPAI N.W. 004 ddle name. GIV Izu	neys (Registratic HARVEY B JA ATHAN L SCHE NY	COBSON ERER (29	DIRECT TELE (please	pplication, JOHN CLA . AISENB PHONE C use Attor JAC FESSION	receive a ARKE HC ERG (19, CALLS TO ney's Doc OBSO AL LIMIT	nd act or JEMAN (2 1007); WII C. Sket No.) NHO ED LIAB	n instruct 22,769); LLIAM E (202) 6: LLMAN BILITY C	ions from I MARVIN F PLAYER 38-6666 N OMPANY
nd 20, 'O'	WER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF	NEY: As a named invested in the Patent and Trust in the Patent and Trust in the Patent and Trust include at least one FAMILY NAME ARAL- CITY ARA TARESPONDENCE TO PROFESS ARAL- CITY ARAL- CITY	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILIT 100 SEVENTH STREET, N. WASHINGTON, D.C., 201	JAN TY COMPAI N.W. O04 GIV IZU	NY EN NAME mi TE OR FOREIC	COBSON ERER (29	DIRECT TELE (please	pplication, JOHN CLA AISENB PHONE C use Attor JAC FESSION	receive a ARKE HC ERG (19, CALLS TO ney's Doc OBSO AL LIMIT	nd act or JEMAN (2 1007); WII C. Sket No.) NHO ED LIAB	n instruct 22,769); LLIAM E (202) 6: LLMAN BILITY C	ions from I MARVIN F PLAYER 38-6666 N OMPANY
Inv	WER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3 SEND COF entor(s) name m FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE	NEY: As a named invested in the Patent and Trust in the Patent and Trust in the Patent and Trust include at least one FAMILY NAME ARAL- CITY ARA TARESPONDENCE TO PROFESS ARAL- CITY ARAL- CITY	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILIT 100 SEVENTH STREET, NWASHINGTON, D.C. 2001	JAN TY COMPAI N.W. O04 GIV IZU	NY EN NAME mi TTE OR FOREIC PAN	COBSON ERER (29	DIRECT TELE (please	pplication, JOHN CLA AISENBI PHONE C use Attor JAC FESSION.	receive a ARKE HO ARKE HO ERG (19. CALLS TO ney's Doc OBSO AL LIMIT MIDDLE NO COUNTRY JAPAN OR COL	nd act or pLMAN (2 007); WII C. cket No.) N HO ED LIAB IAME	n instruct 22,769); LLIAM E (202) 63 PLMAP BILITY C	ions from II MARVIN F PLAYER 38-6666 OMPANY
Inv	WER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COR rentor(s) name mu FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE	NEY: As a named inverses in the Patent and Tri MELSER (27,215); MIC 07) and NATHANIEL A RRESPONDENCE TO PROFESS ust include at least one FAMILY NAME ARAI CITY Tokyo	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILITED SEVENTH STREET, N. WASHINGTON, D.C. 2001	iden name. GIV GIV GIV GIV JAI JAI Jai Jai Jai Jai Jai Jai Jai Ja	NY EN NAME mi TTE OR FOREIC PAN Y	COBSON ERER (29	DIRECT TELE (please	pplication, JOHN CLA AISENB PHONE C use Attor JAC FESSION	receive a ARKE HO ARKE HO ERG (19. CALLS TO ney's Doc OBSO AL LIMIT MIDDLE NO COUNTRY JAPAN OR COL	nd act or pLMAN (2 007); WII C. cket No.) N HO ED LIAB IAME	n instruct 22,769); LLIAM E (202) 63 PLMAP BILITY C	ions from i MARVIN F PLAYER 38-6666 V OMPANY
Inv	VER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF ventor(s) name m FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS FULL NAME *	NEY: As a named inverses in the Patent and Tri MELSER (27,215); MIC 07) and NATHANIEL A RRESPONDENCE TO PROFESS ust include at least one FAMILY NAME ARAI CITY Tokyo_ POST OFFICE ADDR	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILITED SEVENTH STREET, N. WASHINGTON, D.C. 2001	MAN TY COMPAI N.W. 004 GIV Izu STA JAI	NY EN NAME mi TTE OR FOREIC PAN Y	COBSON ERER (29	DIRECT TELE (please	pplication, JOHN CLA AISENBI PHONE (use Attor JAC FESSION STATE JAPA	receive a ARKE HO ARKE HO ERG (19. CALLS TO ney's Doc OBSO AL LIMIT MIDDLE NO COUNTRY JAPAN OR COL	nd act or ILMAN (2007); WIID. D. Chet No.) N HOED LIAB	n instruct 22,769); LLIAM E (202) 63 PLMAP BILITY C	ions from i MARVIN F PLAYER 38-6666 N OMPANY
Inv	VER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF VENTOR TO INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS FULL NAME * OF INVENTOR RESIDENCE & RESIDENCE &	NEY: As a named investigation in the Patent and Trust Include at least one FAMILY NAME ARAI- CITY Tokyo_ POST OFFICE ADDR 19-16, Senjumido FAMILY NAME	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 or ACOBSON HOLM HONAL LIMITED LIABILITED SEVENTH STREET, N. WASHINGTON, D.C. 2001	ALAN TY COMPAI N.W. 004 GIV STA JAN GIV GIV	NY EN NAME mit or Foreic	ERER (29	DIRECT TELE (please	pplication, JOHN CLA AISENBI PHONE (use Attor JAC FESSION STATE JAPA	CALLS TO THE PROPERTY OF COLUMN TO THE PROPERTY OF T	nd act or or old act o	instruct 22,769); LLIAM E (202) 6: DLMAN BILITY C	ions from I MARVIN F PLAYER 38-6666 N OMPANY
Inv	VER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF ventor(s) name mu FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP RESIDENCE & CITIZENSHIP	NEY: As a named investigation in the Patent and Trust Include at least one FAMILY NAME ARAI- CITY Tokyo_ POST OFFICE ADDR 19-16, Senjumido FAMILY NAME	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 OF ACOBSON HOLM HONAL LIMITED LIABILIT HOO SEVENTH STREET, N WASHINGTON, D.C. 200 LUMITED LIABILIT LOOSEVENTH STREET, N WASHINGTON, D.C. 200 LUMITED LOOSEVENTH STREET, N WASHINGT	ALAN TY COMPAI N.W. 004 GIV STA JAN GIV GIV	NY EN NAME MI OTHER OTHER NY EN NAME MI OTHER OTH	ERER (29	DIRECT TELE (please	pplication, JOHN CLA . AISENBI PHONE (use Attor JAC FESSION STATE JAPA	CALLS TO NEW YEAR OF COUNTRY DAPAN OR COL	nd act or or old act o	instruct 22,769); LLIAM E (202) 6: DLMAN BILITY C	ions from I MARVIN F PLAYER 38-6666 N OMPANY
Inv	VER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF ventor(s) name mi FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS FULL NAME * FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS FULL NAME *	NEY: As a named inverses in the Patent and Trust of th	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 OF ACOBSON HOLM HONAL LIMITED LIABILIT HOO SEVENTH STREET, N WASHINGTON, D.C. 200 LUMITED LIABILIT LOOSEVENTH STREET, N WASHINGTON, D.C. 200 LUMITED LOOSEVENTH STREET, N WASHINGT	Allowing attor of therewith. 3.421); JONA 36 (IAN TY COMPAIN.W. 004 ddle name. GIV IZU STA GIV STA CIT Tol	NY EN NAME MI OTHER OTHER NY EN NAME MI OTHER OTH	ERER (29	DIRECT TELE (please	pplication, JOHN CLA AISENBI PHONE C use Attor JAC FESSION STATE JAPA	CALLS TO NEW YEAR OF COUNTRY IN C	nd act or ILMAN (2007); WIID. D. Chet No.) N HOED LIAB	instruct 22,769); LLIAM E (202) 6: DLMAN BILITY C	ions from II MARVIN F PLAYER 38-6666 N OMPANY
Inv	VER OF ATTORN transact all busine 640); ALLEN S. N ON S. HAM (45,3) SEND COF ventor(s) name mi FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS FULL NAME * OF INVENTOR RESIDENCE & CITIZENSHIP POST OFFICE ADDRESS	NEY: As a named investigation in the Patent and TrimeLSER-(27-215); MIGOT) and NATHANIEL ARRESPONDENCE TO PROFESS ust include at least one FAMILY NAME ARALCITY Tokyo_ POST OFFICE ADDRIVATION NAME CITY POST OFFICE ADDRIVATION NAME CITY POST OFFICE ADDRIVATION NAME FAMILY NAME	ademark Office connected CHAEL R. SLOBASKY (26. A. HUMPHRIES (22,772) CUSTOMER NO. 0013 OF ACOBSON HOLM HONAL LIMITED LIABILIT HOO SEVENTH STREET, N WASHINGTON, D.C. 200 LUMITED LIABILIT LOOSEVENTH STREET, N WASHINGTON, D.C. 200 LUMITED LOOSEVENTH STREET, N WASHINGT	ALCOMPAN ALCOMP	NY EN NAME MI OF OR FOREIC ATE OR FOREIC Y	GN COUN	DIRECT TELE (please	pplication, JOHN CLA AISENB PHONE C use Attor JAC FESSION STATE STATE	COUNTR' COUNTR' COR COL	nd act or ILMAN (2007); WIID. D. Chet No.) N HOED LIAB	instruct 22,769); LLIAM E (202) 63 PLMAN BILITY C	ions from I MARVIN F PLAYER 38-6666 N OMPANY

DATE DATE 2001 September 27,

SIGNATURE OF INVENTOR 202*

Additional inventors are named on separately numbered sheets attached hereto

© JH 2001 (COPYING WITHOUT DELETIONS PERMITTED)

SIGNATURE OF INVENTOR 201*

Law Offices of

JACOBSON HOLMAN
PROFESSIONAL LIMITED LIABILITY COMPANY
THE JENIFER BUILDING
400 SEVENTH STREET, N.W.
WASHINGTON, DC 20004

Attn	√'s	Dock	et N	lo.	 			_

SMALL ENTITY DECLARATION

	[37 CF	R 1.9(c-f)]	
Each undersigne	ed declares that:		
(1)	the application attached hereto.		
(2)	U.S. Application Serial No.	, filed	
(3)	U.S. Patent No.	Issued	
is entitled to the virtue of the follo	benefits of "small entity" status for paying reduced wing:	fees under 35 USC 41(a) and (b) to the Patent	and Trademark Office by
(4) as defined in 37	Each undersigned declares that he/she qual CFR 1.9(c).	fies as an independent inventor, or would qua	lify had he/she made the
	The undersigned declares that he/she is an as as a small business concern as defined in 37 CFR small business concern, or if the rights are not exceed the small business concern.	1.9(d); that exclusive rights to the invention ha	ave been conveyed to and
(6) organization qua	The undersigned declares that he/she is an of diffies as a nonprofit organization as defined in	ficial empowered to act on behalf of the organiz	ation identified below; that
	(a) 37 CFR 1.9(e)(1)		
	(b) 37 CFR 1.9(e)(2)		
	(c) 37 CFR 1.9(e)(3)		
that e	(d) 37 CFR 1.9(e)(4) State law exclusive rights to the invention have been conveyed ther rights belong to organizations as defined in 37	v of to and remain with the organization, or if the rig CFR 1.9.	; ghts are not exclusive, that
(7) under contract o	Each person, concern or organization to which I r law to assign, grant, convey, or license any rights		sed, or am under an
	(a) IZ no such person, concern or organiz	ation	
	(b) persons, concerns or organization li		
[a se] statu	parate declaration is required from <u>each</u> named pers s as "small entities."]	on, concern or organization having rights to this	s invention averring to their
Full Name	•		
Address			
adalari Karat	☐ Individual ☐ Small Busines	s Concern Nonprofit Organ	ization
- I/we acknowle	edge the duty to file, in this application or patent, no		
entity prior to pay	ying, or at the time of paying, the earliest of the issue er appropriate. (37 CFR 1.28(b))		
are believed to b by fine or impriso	eclare all statements made herein of his/her own kr e true; and further that these statements were made onment, or both, under Section 1001 of Title 18 of the e application, any patent issued thereon, or any pa	e with the knowledge that willful false statement United States Code and that such willful false s	is so made are punishable
(8)	Izumi Arai	Sumi Arai	September 27,2001
	Typed Name of Inventor	Signature /	Date
	Typed Name of Inventor	Signature	Date
	Typed Name of Inventor	Signature	Date
(0)	Typed Name of Inventor	Signature	Date
(9)	Name of Small Bu	siness Concern or Nonprofit Organization	
	Typed Name By	Signature	Date
	Title of Signatory		

INSTRUCTIONS FOR THE COMPLETION OF SMALL ENTITY DECLARATION

Check box (1) if for use with application about to be filed.

Check box (2) or (3) if for use with application already on file or Patent and complete U.S. Serial No. and Filing Date. or Patent No. and issue date, if known.

CHECK ONLY ONE OF BOXES 4, 5 OR 6, WHICHEVER IS APPLICABLE

Check box (4), individuals who are either: (a) an inventor or (b) a person who would qualify as an independent inventor had he/she made the invention, must sign and date at (8), if he/she have not, and are under no obligation to assign, grant, convey or license any right in the invention to any person who could not likewise be classified as an independent inventor if that person had made the invention or to any concern which would not qualify as a small business concern or non-profit organization (see below).

Check box (5), date, complete name of small business concern and authorized signatory, sign and complete his/her title at (9), if small entity status is claimed by virtue of inventor(s) rights having been, or being obligated to assign, grant, convey or license, to a concern whose number of employees, including those of its affiliates, does not exceed 500 persons. Concerns are affiliates when either controls, directly or indirectly, or has the power to control, the other, or a third party has the power to control both. Number of employees is average over fiscal year of those employed during each pay period, including full-time, part-time or temporary employees. If the small business concern has or is under obligation by contract or law to transfer any rights to another who cannot qualify as small entity, then small entity status not applicable.

Check box (6) and subsection (a), (b), (c) or (d), date, complete name of the nonprofit organization and authorized signatory sign and complete his/her title at (9), if small entity status is claimed by virtue of inventor(s) rights having been, or being obligated to, assign, grant, convey or license, to a nonprofit organization. Subsection (6)(a) to be checked if organization is university or other institution of higher learning; (6)(b) to be checked if organization of type described in Section 501(c)(3) of IRS Code and exempt from taxation under Section 501(a); (6)(c) to be checked if organization is nonprofit scientific or educational organization qualified under a statute of State of the U.S.; and (6)(d) to be checked if foreign organization and would qualify under (6)(b) or (6)(c) if such organization was located in the U.S.A. Fill in the State law under which the organization would qualify.

Check box (7)(a) or (b) as the facts dictate.

IMPORTANT

- (1) Note that U.S. lawyers and agents cannot complete this document after signed. Therefore please completely fill it in before sending to us.
- (2) Each person, concern or organization that has an interest in this invention must sign one of the "Small Entity" Declarations. For example, if an inventor/employee has an obligation to assign to his employer, a corporation having fewer than 500 employees, which corporation has licensed this invention to a licensee corporation also having less than 500 employees, then three "Small Entity" declarations are necessary before the lesser fee can be paid: one from the inventor; one from an official of the employer; and one from an official of the licensee. In the declarations by the inventors and the employer paragraph 7(b) would have to be checked and filled in, the licensee would check paragraph 7(a).

We will be pleased to answer your questions. You may contact us in the following ways:

JACOBSON HOLMAN

PROFESSIONAL LIMITED LIABILITY COMPANY

TELEPHONE:

(202) 638-6666

TELFAX:

(202) 393-5350

(202) 393-5351

(202) 393-5352

E-MAIL:

ìP@JPHS.COM